

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/20/99
Date Received: 05/18/99
Project: Metro KC Grab, PO# M79101
Date Samples Extracted: 05/18/99
Date Extracts Analyzed: 05/18/99

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE
FOR CHROMIUM, COPPER, NICKEL, ZINC
USING METHOD 6010**

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M79101	0.54	0.56	0.58	0.06
Method Blank	<0.05	<0.05	<0.05	<0.05

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QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 905076-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.54	0.48	12	0-20
Copper	mg/L (ppm)	0.56	0.47	17	0-20
Nickel	mg/L (ppm)	0.58	0.55	5	0-20
Zinc	mg/L (ppm)	0.06	0.09	40a	0-20

Laboratory Code: 905076-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	% Recovery MS	% Recovery MSD	Acceptance Criteria	RPD
Chromium	mg/L (ppm)	5	0.54	86	93	80-120	8
Copper	mg/L (ppm)	5	0.56	93	95	80-120	2
Nickel	mg/L (ppm)	10	0.58	82	92	80-120	11
Zinc	mg/L (ppm)	5	0.06	89	93	80-120	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD
Chromium	mg/L (ppm)	5	96	96	80-120	0
Copper	mg/L (ppm)	5	95	97	80-120	2
Nickel	mg/L (ppm)	10	96	96	80-120	0
Zinc	mg/L (ppm)	5	96	96	80-120	0

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 20, 1999

Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on May 18, 1999 from your Metro KC Grab, PO# M79101 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Manuel Marti
Project Manager

Enclosures
ACU0520R.DOC

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May 20, 1999

DUPLICATE COPY

INVOICE #99ACU0520-1

Accounts Payable
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

RE: Project Metro KC Grab, PO# M79101: Results of testing requested by
Gerry Thompson for material submitted on May 18, 1999.

1 water sample analyzed for Chromium, Copper, Nickel, and Zinc using Method 6010 @ \$80 per sample	\$ 80.00
100 % Rush Surcharge 24 hr Turnaround	<u>80.00</u>
Amount Due	\$ 160.00

FEDERAL TAX ID (b) (6)